

Author index to volume 209

- Aguilar, A., see González, M. 209 (1996) 355
Aguilar, A., see Romero, T. 209 (1996) 217
Aguillon, F., see Sizun, M. 209 (1996) 327
Albertí, M., see Romero, T. 209 (1996) 217
Alcaraz, C., see Dutuit, O. 209 (1996) 177
Anderson, J.E., see Cooper, G. 209 (1996) 61
Aquilanti, V., D. Cappelletti and F. Pirani, Range and strength of interatomic forces: dispersion and induction contributions to the bonds of dications and of ionic molecules 209 (1996) 299
Aquilanti, V., S. Cavalli, C. Coletti and G. Grossi, Alternative Sturmian bases and momentum space orbitals: an application to the hydrogen molecular ion 209 (1996) 405

Bassi, D., see Tosi, P. 209 (1996) 227
Bastida, A. and F.X. Gadea, Simulation of the Ar_3^+ absorption spectrum using Molecular Dynamics 209 (1996) 291
Bennett, F.R., J.P. Maier, G. Chambaud and P. Rosmus, Photodissociation, charge and atom transfer processes in electronically excited states of N_3^+ 209 (1996) 275
Bennington, S.M., see Fillaux, F. 209 (1996) 111
Berthomieu, D., see Dutuit, O. 209 (1996) 259
Bieske, E.J., see Ruchti, T. 209 (1996) 169
Billing, G.D. and N. Marković, Semi-classical treatment of chemical reactions 209 (1996) 377
Billing, G.D., see Sizun, M. 209 (1996) 327
Blasco, R.M., see González, M. 209 (1996) 355
Blunt, V.M., N. Mina-Camilde, D.L. Cedeño and C. Manzanares I, Vibrational overtone spectroscopy of CH_2D_2 in liquid argon solutions 209 (1996) 79
Bougeard, D., see Ermoshin, V.A. 209 (1996) 41
Brion, C.E., see Cooper, G. 209 (1996) 61
Brunetti, B., S. Falcinelli, A. Sassara, J. de Andres and F. Vecchiocattivi, Auto-ionization of the collisional complexes of metastable neon and H_2 , D_2 , or HD 209 (1996) 205

Cappelletti, D., see Aquilanti, V. 209 (1996) 299
Cappelletti, D., see Tosi, P. 209 (1996) 227
Cavalli, S., see Aquilanti, V. 209 (1996) 405
Cedeño, D.L., see Blunt, V.M. 209 (1996) 79
Chambaud, G., see Bennett, F.R. 209 (1996) 275
Chergui, M., see Gödderz, K.H. 209 (1996) 91
Coletti, C., see Aquilanti, V. 209 (1996) 405
Colominas, C., see Orozco, M. 209 (1996) 19

- Connelly, J.P., see Ruchti, T. 209 (1996) 169
- Cooper, G., J.E. Anderson and C.E. Brion, Absolute photoabsorption and photoionization of formaldehyde in the VUV and soft X-ray regions (3–200 eV) 209 (1996) 61
- De Andrés, J., see Romero, T. 209 (1996) 217
- De Andres, J., see Brunetti, B. 209 (1996) 205
- Delboulbé, A., see Richard-Viard, M. 209 (1996) 159
- Delvai, C., see Tosi, P. 209 (1996) 227
- Delwiche, J., see Hubin-Franskin, M.-J. 209 (1996) 143
- Dmitriev, O., see Tosi, P. 209 (1996) 227
- Dutuit, O., C. Alcaraz, D. Gerlich, P.M. Guyon, J. Hepburn, C. Métayer-Zeitoun, J.B. Ozenne, M. Schweizer and T. Weng, A state-selected study of $\text{Ar}^+(\text{}^2\text{P}_{3/2,1/2}) + \text{O}_2$ charge transfer at collision energies below 4 eV using synchrotron radiation and guided beam techniques 209 (1996) 177
- Dutuit, O., H. Palm, D. Berthomieu and Z. Herman, Reactions of H^- , D^- and HD^- transfer between an ethylene cation and propane $\text{CH}_3\text{CD}_2\text{CH}_3$: a study of kinetics using state-selected reactants 209 (1996) 259
- Dutuit, O., see Hubin-Franskin, M.-J. 209 (1996) 143
- Ermoshin, V.A., K.S. Smirnov and D. Bougeard, Ab initio generalized valence force field for zeolite modelling. 2. Aluminosilicates 209 (1996) 41
- Falcinelli, S., see Brunetti, B. 209 (1996) 205
- Fillaux, F., S.M. Bennington, J. Tomkinson and L.T. Yu, Inelastic neutron-scattering study of free proton dynamics in $\gamma\text{-MnO}_2$ 209 (1996) 111
- Flament, J.-P., see Hubin-Franskin, M.-J. 209 (1996) 143
- Gadea, F.X. and I. Paidarová, Ab initio calculations for Ar_2^+ , He_2^+ and He_3^+ , of interest for the modelling of ionic rare-gas clusters 209 (1996) 281
- Gadea, F.X., see Bastida, A. 209 (1996) 291
- Gerlich, D., see Dutuit, O. 209 (1996) 177
- Gerlich, D., see Mark, S. 209 (1996) 235
- Gerlich, D., see Paul, W. 209 (1996) 265
- Giménez, X., see González, M. 209 (1996) 355
- Gödderz, K.H., N. Schwentner and M. Chergui, Absorption by dissociative continua and Rydberg states in condensed matter: HCl in rare gas matrices 209 (1996) 91
- González, M., R.M. Blasco, X. Giménez and A. Aguilar, A quasiclassical and approximate quantum mechanical study of the intramolecular isotope effect in proton transfer elementary reactions: the $\text{Ne} + \text{HD}^+ \rightarrow \text{NeH}^+(\text{NeD}^+) + \text{D}(\text{H})$ system at low and moderate collision energies (0.02–0.77 eV) 209 (1996) 355
- Gordon, E., see Mackenzie, S.R. 209 (1996) 127
- Grossi, G., see Aquilanti, V. 209 (1996) 405
- Grycuk, T., see Helmi, M.S. 209 (1996) 53
- Guyon, P.-M., see Hubin-Franskin, M.-J. 209 (1996) 143
- Guyon, P.M., see Dutuit, O. 209 (1996) 177
- Halse, E.J., see Mackenzie, S.R. 209 (1996) 127
- Helmi, M.S., T. Grycuk and G.D. Roston, Interaction potentials of Cd–Xe from temperature dependent absorption spectra 209 (1996) 53

- Hepburn, J., see Dutuit, O. 209 (1996) 177
- Herman, Z., see Dutuit, O. 209 (1996) 259
- Hubin-Franskin, M.-J., J. Delwiche, P.-M. Guyon, M. Richard-Viard, M. Lavollée, O. Dutuit, J.-M. Robbe and J.-P. Flament, Dissociation of the COS^+ ion by photoionisation: experiment and ab initio calculations The $\tilde{A}-\tilde{X}$ Franck-Condon energy gap and the $\tilde{A}^2\Pi$, $\tilde{B}^2\Sigma^+$ vibronic state Franck-Condon energy regions 209 (1996) 143
- Kuntz, P.J., I. Paidarová and R. Polák, Theoretical charge-transfer cross sections for $\text{H}^+ + \text{HCl}(\text{X}^1\Sigma^+) \rightarrow \text{H}(\text{S}_g) + \text{HCl}^+(\text{A}^2\Sigma^+)$ II: classical path trajectory calculations 209 (1996) 389
- Lavollée, M., see Hubin-Franskin, M.-J. 209 (1996) 143
- Lee, S.-L., see Slanina, Z. 209 (1996) 13
- Lucas, J.M., see Romero, T. 209 (1996) 217
- Lücke, B., see Paul, W. 209 (1996) 265
- Luque, F.J., see Orozco, M. 209 (1996) 19
- Mackenzie, S.R., E.J. Halse, E. Gordon, D. Rolland and T.P. Softley, Pulsed-field ionization spectroscopy of CO via the $\text{E}^1\Pi$ state and NO via the $\text{B}^2\Pi$ state 209 (1996) 127
- Maier, J.P., see Bennett, F.R. 209 (1996) 275
- Maier, J.P., see Ruchti, T. 209 (1996) 169
- Manzanares I, C., see Blunt, V.M. 209 (1996) 79
- Mark, S. and D. Gerlich, Differential cross sections, measured with guided ion beams: applications to $\text{N}^+ + \text{N}_2$ and $\text{C}_2\text{H}_2^+ + \text{C}_2\text{D}_4$ collisions 209 (1996) 235
- Marković, N., see Billing, G.D. 209 (1996) 377
- Marković, N., see Sizun, M. 209 (1996) 327
- Métayer-Zeitoun, C., see Dutuit, O. 209 (1996) 177
- Mina-Camilde, N., see Blunt, V.M. 209 (1996) 79
- Niehaus, A., see Uiterwaal, C.J.G.J. 209 (1996) 195
- Orozco, M., C. Colominas and F.J. Luque, Theoretical determination of the solvation free energy in water and chloroform of the nucleic acid bases 209 (1996) 19
- Ōsawa, E., see Slanina, Z. 209 (1996) 13
- Ozenne, J.B., see Dutuit, O. 209 (1996) 177
- Paidarová, I., see Gadea, F.X. 209 (1996) 281
- Paidarová, I., see Kuntz, P.J. 209 (1996) 389
- Palm, H., see Dutuit, O. 209 (1996) 259
- Paul, W., S. Schlemmer, B. Lücke and D. Gerlich, Deuteration of positive hydrogen cluster ions H_5^+ to H_{17}^+ at 10 K 209 (1996) 265
- Personov, R.I., see Vainer, Yu.G. 209 (1996) 101
- Pirani, F., see Aquilanti, V. 209 (1996) 299
- Plakhotnik, T.V., see Vainer, Yu.G. 209 (1996) 101
- Polák, R., see Kuntz, P.J. 209 (1996) 389
- Richard-Viard, M., A. Delboulbé and M. Vervloet, Experimental study of the dissociation of selected internal energy ions produced in low quantities: application to N_2O^+ ions in the Franck-Condon gap and to small ionic water clusters 209 (1996) 159
- Richard-Viard, M., see Hubin-Franskin, M.-J. 209 (1996) 143

- Robbe, J.-M., see Hubin-Franskin, M.-J. 209 (1996) 143
- Rohrbacher, A., see Ruchti, T. 209 (1996) 169
- Rolland, D., see Mackenzie, S.R. 209 (1996) 127
- Romero, T., J. de Andrés, M. Albertí, J.M. Lucas and A. Aguilar, Electronic excitation processes in the collisional system $\text{Na}(3^2\text{S}) + \text{Rb}^+(^1\text{S}) \rightarrow \text{Na}^* + \text{Rb}^+(^1\text{S})$ by crossed molecular beams in the 0.1–5.0 keV energy range 209 (1996) 217
- Rosmus, P., see Bennett, F.R. 209 (1996) 275
- Roston, G.D., see Helmi, M.S. 209 (1996) 53
- Ruchti, T., A. Rohrbacher, T. Speck, J.P. Connelly, E.J. Bieske and J.P. Maier, An electron impact ionization slit-jet apparatus for laser absorption spectroscopy 209 (1996) 169
- Sassara, A., see Brunetti, B. 209 (1996) 205
- Schlemmer, S., see Paul, W. 209 (1996) 265
- Schweizer, M., see Dutuit, O. 209 (1996) 177
- Schwentner, N., see Gödderz, K.H. 209 (1996) 91
- Sidis, V., Diabatic excited states of the $(\text{HeH}_2)^+$ molecular ion for the charge exchange–excitation reaction: $\text{He}^+ + \text{H}_2 \rightarrow \text{HeH}^+ + \text{H}^*$ 209 (1996) 313
- Sidis, V., see Sizun, M. 209 (1996) 327
- Sizun, M., F. Aguillon, V. Sidis, V. Zenevich, G.D. Billing and N. Marković, Theoretical investigation of the $\text{Ar}^+(J) + \text{H}_2 \rightarrow \text{ArH}^+ + \text{H}$ reaction: semiclassical coupled wavepacket treatment 209 (1996) 327
- Slanina, Z., S.-L. Lee, M. Yoshida and E. Ōsawa, Computations on nineteen isolated-pentagon-rule isomers of C_{86} 209 (1996) 13
- Smirnov, K.S., see Ermoshin, V.A. 209 (1996) 41
- Softley, T.P., see Mackenzie, S.R. 209 (1996) 127
- Speck, T., see Ruchti, T. 209 (1996) 169
- Tomkinson, J., see Fillaux, F. 209 (1996) 111
- Tosi, P., C. Delvai, D. Bassi, O. Dmitriev, D. Cappelletti and F. Vecchiocattivi, Charge transfer of krypton ions with methane molecules from thermal energy to 10 eV 209 (1996) 227
- Uiterwaal, C.J.G.J., J. van der Weg, J. van Eck, P.A. Zeijlmans van Emmichoven and A. Niehaus, Charge transfer and atomic rearrangement in collisions of $\text{Ar}^+(^2\text{P}_{1/2,3/2})$ with H_2 measured with a new PEPICO apparatus 209 (1996) 195
- Vainer, Yu.G., T.V. Plakhotnik and R.I. Personov, Dephasing and diffusional linewidths in spectra of doped amorphous solids: comparison of photon echo and single molecule spectroscopy data for terrylene in polyethylene 209 (1996) 101
- Van der Weg, J., see Uiterwaal, C.J.G.J. 209 (1996) 195
- Van Eck, J., see Uiterwaal, C.J.G.J. 209 (1996) 195
- Varandas, A.J.C. and H.G. Yu, Spectral quantization of transition state resonances in collinear $\text{Mu} + \text{H}_2$ and $\text{Mu} + \text{D}_2$ collisions 209 (1996) 31
- Vecchiocattivi, F., see Brunetti, B. 209 (1996) 205
- Vecchiocattivi, F., see Tosi, P. 209 (1996) 227
- Vervloet, M., see Richard-Viard, M. 209 (1996) 159
- Vojtík, J., Theoretical picture of the dynamics of the autoionization event in $\text{He}(2^3\text{S})\text{--H}_2$ Penning ionization: collision energy dependence 209 (1996) 367

Weiss, U., see Winterstetter, M.	209 (1996) 1
Weng, T., see Dutuit, O.	209 (1996) 177
Winterstetter, M. and U. Weiss, Dynamical simulations for dissipative multi-state systems: discretized integral equation approach	209 (1996) 1
Yoshida, M., see Slanina, Z.	209 (1996) 13
Yu, H.G., see Varandas, A.J.C.	209 (1996) 31
Yu, L.T., see Fillaux, F.	209 (1996) 111
Zeijlmans van Emmichoven, P.A., see Uiterwaal, C.J.G.J.	209 (1996) 195
Zenevich, V., see Sizun, M.	209 (1996) 327

Subject index to volume 209

Methods

Theoretical

Group theory and algebras

- Alternative Sturmian bases and momentum space orbitals: an application to the hydrogen molecular ion, V. Aquilanti, S. Cavalli, C. Coletti and G. Grossi 209 (1996) 405

Classical mechanics

- Theoretical charge-transfer cross sections for $H^+ + HCl(X^1\Sigma^+) \rightarrow H(^2S_g) + HCl^+(A^2\Sigma^+)$
II: classical path trajectory calculations, P.J. Kuntz, I. Paidarová and R. Polák 209 (1996) 389

Transport quantum mechanics

- Dynamical simulations for dissipative multi-state systems: discretized integral equation approach, M. Winterstetter and U. Weiss 209 (1996) 1

Equilibrium statistical mechanics

- Computations on nineteen isolated-pentagon-rule isomers of C_{86} , Z. Slanina, S.-L. Lee, M. Yoshida and E. Ōsawa 209 (1996) 13

Ab initio schemes for stationary properties

- Computations on nineteen isolated-pentagon-rule isomers of C_{86} , Z. Slanina, S.-L. Lee, M. Yoshida and E. Ōsawa 209 (1996) 13

- Ab initio generalized valence force field for zeolite modelling. 2. Aluminosilicates, V.A. Ermoshin, K.S. Smirnov and D. Bougeard 209 (1996) 41

- Photodissociation, charge and atom transfer processes in electronically excited states of N_3^+ , F.R. Bennett, J.P. Maier, G. Chambaud and P. Rosmus 209 (1996) 275

- Ab initio calculations for Ar_2^+ , He_2^+ and He_3^+ , of interest for the modelling of ionic rare-gas clusters, F.X. Gadea and I. Paidarová 209 (1996) 281

- Range and strength of interatomic forces: dispersion and induction contributions to the bonds of dications and of ionic molecules, V. Aquilanti, D. Cappelletti and F. Pirani 209 (1996) 299

- Alternative Sturmian bases and momentum space orbitals: an application to the hydrogen molecular ion, V. Aquilanti, S. Cavalli, C. Coletti and G. Grossi 209 (1996) 405

Computational and simulation methods

- Dynamical simulations for dissipative multi-state systems: discretized integral equation approach, M. Winterstetter and U. Weiss 209 (1996) 1

- Computations on nineteen isolated-pentagon-rule isomers of C_{86} , Z. Slanina, S.-L. Lee, M. Yoshida and E. Ōsawa 209 (1996) 13
- Theoretical determination of the solvation free energy in water and chloroform of the nucleic acid bases, M. Orozco, C. Colominas and F.J. Luque 209 (1996) 19
- Spectral quantization of transition state resonances in collinear $Mu + H_2$ and $Mu + D_2$ collisions, A.J.C. Varandas and H.G. Yu 209 (1996) 31
- Ab initio generalized valence force field for zeolite modelling. 2. Aluminosilicates, V.A. Ermoshin, K.S. Smirnov and D. Bougeard 209 (1996) 41
- Ab initio calculations for Ar_2^+ , He_2^+ and He_3^+ , of interest for the modelling of ionic rare-gas clusters, F.X. Gadea and I. Paidarová 209 (1996) 281
- Simulation of the Ar_3^+ absorption spectrum using Molecular Dynamics, A. Bastida and F.X. Gadea 209 (1996) 291
- Theoretical investigation of the $Ar^+(J) + H_2 \rightarrow ArH^+ + H$ reaction: semiclassical coupled wavepacket treatment, M. Sizun, F. Aguillon, V. Sidis, V. Zenevich, G.D. Billing and N. Marković 209 (1996) 327
- Theoretical picture of the dynamics of the autoionization event in $He(2^3S)-H_2$ Penning ionization: collision energy dependence, J. Vojtík 209 (1996) 367
- Theoretical charge-transfer cross sections for $H^+ + HCl(X^1\Sigma^+) \rightarrow H(^2S_g) + HCl^+(A^2\Sigma^+)$ II: classical path trajectory calculations, P.J. Kuntz, I. Paidarová and R. Polák 209 (1996) 389
- Molecular dynamics and scattering theory*
- Spectral quantization of transition state resonances in collinear $Mu + H_2$ and $Mu + D_2$ collisions, A.J.C. Varandas and H.G. Yu 209 (1996) 31
- Ab initio generalized valence force field for zeolite modelling. 2. Aluminosilicates, V.A. Ermoshin, K.S. Smirnov and D. Bougeard 209 (1996) 41
- Charge transfer and atomic rearrangement in collisions of $Ar^+(^2P_{1/2,3/2})$ with H_2 measured with a new PEPICO apparatus, C.J.G.J. Uiterwaal, J. van der Weg, J. van Eck, P.A. Zeijlmans van Emmichoven and A. Niehaus 209 (1996) 195
- Charge transfer of krypton ions with methane molecules from thermal energy to 10 eV, P. Tosi, C. Delvai, D. Bassi, O. Dmitriev, D. Cappelletti and F. Vecchiocattivi 209 (1996) 227
- Diabatic excited states of the $(HeH_2)^+$ molecular ion for the charge exchange-excitation reaction: $He^+ + H_2 \rightarrow HeH^+ + H^+$, V. Sidis 209 (1996) 313
- Theoretical investigation of the $Ar^+(J) + H_2 \rightarrow ArH^+ + H$ reaction: semiclassical coupled wavepacket treatment, M. Sizun, F. Aguillon, V. Sidis, V. Zenevich, G.D. Billing and N. Marković 209 (1996) 327
- A quasiclassical and approximate quantum mechanical study of the intramolecular isotope effect in proton transfer elementary reactions: the $Ne + HD^+ \rightarrow NeH^+(NeD^+) + D(H)$ system at low and moderate collision energies (0.02–0.77 eV), M. González, R.M. Blasco, X. Giménez and A. Aguilar 209 (1996) 355
- Theoretical picture of the dynamics of the autoionization event in $He(2^3S)-H_2$ Penning ionization: collision energy dependence, J. Vojtík 209 (1996) 367
- Semi-classical treatment of chemical reactions, G.D. Billing and N. Marković 209 (1996) 377

Experimental

Visible and UV spectroscopy

- Interaction potentials of Cd–Xe from temperature dependent absorption spectra, M.S. Helmi, T. Grycuk and G.D. Roston 209 (1996) 53

- An electron impact ionization slit-jet apparatus for laser absorption spectroscopy, T. Ruchti, A. Rohrbacher, T. Speck, J.P. Connelly, E.J. Bieske and J.P. Maier 209 (1996) 169
- Fluorescence spectroscopy*
- Electronic excitation processes in the collisional system $\text{Na}(3^2\text{S}) + \text{Rb}^+(^1\text{S}) \rightarrow \text{Na}^* + \text{Rb}^+(^1\text{S})$ by crossed molecular beams in the 0.1–5.0 keV energy range, T. Romero, J. de Andrés, M. Albertí, J.M. Lucas and A. Aguilar 209 (1996) 217
- Photoelectron and Auger spectroscopy*
- Dissociation of the COS^+ ion by photoionisation: experiment and ab initio calculations The $\tilde{\text{A}}-\tilde{\text{X}}$ Franck–Condon energy gap and the $\tilde{\text{A}}^2\Pi$, $\tilde{\text{B}}^2\Sigma^+$ vibronic state Franck–Condon energy regions, M.-J. Hubin-Franskin, J. Delwiche, P.-M. Guyon, M. Richard-Viard, M. Lavollée, O. Dutuit, J.-M. Robbe and J.-P. Flament 209 (1996) 143
- Charge transfer and atomic rearrangement in collisions of $\text{Ar}^+(^2\text{P}_{1/2,3/2})$ with H_2 measured with a new PEPICO apparatus, C.J.G.J. Uiterwaal, J. van der Weg, J. van Eck, P.A. Zeijlmans van Emmichoven and A. Niehaus 209 (1996) 195
- Electron impact spectroscopy*
- Absolute photoabsorption and photoionization of formaldehyde in the VUV and soft X-ray regions (3–200 eV), G. Cooper, J.E. Anderson and C.E. Brion 209 (1996) 61
- Laser methods*
- Vibrational overtone spectroscopy of CH_2D_2 in liquid argon solutions, V.M. Blunt, N. Mina-Camilde, D.L. Cedeño and C. Manzanares I 209 (1996) 79
- Pulsed-field ionization spectroscopy of CO via the $\text{E}^1\Pi$ state and NO via the $\text{B}^2\Pi$ state, S.R. Mackenzie, E.J. Halse, E. Gordon, D. Rolland and T.P. Softley 209 (1996) 127
- An electron impact ionization slit-jet apparatus for laser absorption spectroscopy, T. Ruchti, A. Rohrbacher, T. Speck, J.P. Connelly, E.J. Bieske and J.P. Maier 209 (1996) 169
- Synchrotron spectroscopies*
- Absorption by dissociative continua and Rydberg states in condensed matter: HCl in rare gas matrices, K.H. Gödderz, N. Schwentner and M. Chergui 209 (1996) 91
- Dissociation of the COS^+ ion by photoionisation: experiment and ab initio calculations The $\tilde{\text{A}}-\tilde{\text{X}}$ Franck–Condon energy gap and the $\tilde{\text{A}}^2\Pi$, $\tilde{\text{B}}^2\Sigma^+$ vibronic state Franck–Condon energy regions, M.-J. Hubin-Franskin, J. Delwiche, P.-M. Guyon, M. Richard-Viard, M. Lavollée, O. Dutuit, J.-M. Robbe and J.-P. Flament 209 (1996) 143
- Experimental study of the dissociation of selected internal energy ions produced in low quantities: application to N_2O^+ ions in the Franck–Condon gap and to small ionic water clusters, M. Richard-Viard, A. Delboulbé and M. Vervloet 209 (1996) 159
- A state-selected study of $\text{Ar}^+(^2\text{P}_{3/2,1/2}) + \text{O}_2$ charge transfer at collision energies below 4 eV using synchrotron radiation and guided beam techniques, O. Dutuit, C. Alcaraz, D. Gerlich, P.M. Guyon, J. Hepburn, C. Métayer-Zeitoun, J.B. Ozenne, M. Schweizer and T. Weng 209 (1996) 177
- Reactions of H^- , D^- and HD^- transfer between an ethylene cation and propane $\text{CH}_3\text{CD}_2\text{CH}_3$: a study of kinetics using state-selected reactants, O. Dutuit, H. Palm, D. Berthomieu and Z. Herman 209 (1996) 259

Coherent optical spectroscopy

- Dephasing and diffusional linewidths in spectra of doped amorphous solids: comparison of photon echo and single molecule spectroscopy data for terrylene in polyethylene, Yu.G. Vainer, T.V. Plakhotnik and R.I. Personov 209 (1996) 101

Multiple resonance spectroscopy

- Pulsed-field ionization spectroscopy of CO via the $E^1\Pi$ state and NO via the $B^2\Pi$ state, S.R. Mackenzie, E.J. Halse, E. Gordon, D. Rolland and T.P. Softley 209 (1996) 127

Optoacoustic spectroscopy

- Vibrational overtone spectroscopy of CH_2D_2 in liquid argon solutions, V.M. Blunt, N. Mina-Camilde, D.L. Cedeño and C. Manzanares I 209 (1996) 79

Atomic and molecular beam techniques

- Auto-ionization of the collisional complexes of metastable neon and H_2 , D_2 , or HD, B. Brunetti, S. Falcinelli, A. Sassara, J. de Andres and F. Vecchiocattivi 209 (1996) 205
- Electronic excitation processes in the collisional system $Na(3^2S) + Rb^+(^1S) \rightarrow Na^+ + Rb^+(^1S)$ by crossed molecular beams in the 0.1–5.0 keV energy range, T. Romero, J. de Andrés, M. Albertí, J.M. Lucas and A. Aguilar 209 (1996) 217
- Charge transfer of krypton ions with methane molecules from thermal energy to 10 eV, P. Tosi, C. Delvai, D. Bassi, O. Dmitriev, D. Cappelletti and F. Vecchiocattivi 209 (1996) 227
- Differential cross sections, measured with guided ion beams: applications to $N^+ + N_2$ and $C_2H_2^+ + C_2D_4$ collisions, S. Mark and D. Gerlich 209 (1996) 235

Time-resolved experiments

- Dephasing and diffusional linewidths in spectra of doped amorphous solids: comparison of photon echo and single molecule spectroscopy data for terrylene in polyethylene, Yu.G. Vainer, T.V. Plakhotnik and R.I. Personov 209 (1996) 101
- Experimental study of the dissociation of selected internal energy ions produced in low quantities: application to N_2O^+ ions in the Franck–Condon gap and to small ionic water clusters, M. Richard-Viard, A. Delboulbé and M. Vervloet 209 (1996) 159

Mass spectrometry

- Absolute photoabsorption and photoionization of formaldehyde in the VUV and soft X-ray regions (3–200 eV), G. Cooper, J.E. Anderson and C.E. Brion 209 (1996) 61
- Dissociation of the COS^+ ion by photoionisation: experiment and ab initio calculations The $\tilde{A}-\tilde{X}$ Franck–Condon energy gap and the $\tilde{A}^2\Pi$, $\tilde{B}^2\Sigma^+$ vibronic state Franck–Condon energy regions, M.-J. Hubin-Franskin, J. Delwiche, P.-M. Guyon, M. Richard-Viard, M. Lavollée, O. Dutuit, J.-M. Robbe and J.-P. Flament 209 (1996) 143
- Charge transfer and atomic rearrangement in collisions of $Ar^+(^2P_{1/2,3/2})$ with H_2 measured with a new PEPICO apparatus, C.J.G.J. Uiterwaal, J. van der Weg, J. van Eck, P.A. Zeijlmans van Emmichoven and A. Niehaus 209 (1996) 195
- Charge transfer of krypton ions with methane molecules from thermal energy to 10 eV, P. Tosi, C. Delvai, D. Bassi, O. Dmitriev, D. Cappelletti and F. Vecchiocattivi 209 (1996) 227
- Differential cross sections, measured with guided ion beams: applications to $N^+ + N_2$ and $C_2H_2^+ + C_2D_4$ collisions, S. Mark and D. Gerlich 209 (1996) 235
- Reactions of H^- , D^- and HD^- transfer between an ethylene cation and propane $CH_3CD_2CH_3$: a study of kinetics using state-selected reactants, O. Dutuit, H. Palm, D. Berthomieu and Z. Herman 209 (1996) 259

- Deuteration of positive hydrogen cluster ions H_5^+ to H_{17}^+ at 10 K, W. Paul, S. Schlemmer, B. Lücke and D. Gerlich 209 (1996) 265

Neutron scattering

- Inelastic neutron-scattering study of free proton dynamics in γ - MnO_2 , F. Fillaux, S.M. Bennington, J. Tomkinson and L.T. Yu 209 (1996) 111

Field emission and field ionization

- Pulsed-field ionization spectroscopy of CO via the $E^1\Pi$ state and NO via the $B^2\Pi$ state, S.R. Mackenzie, E.J. Halse, E. Gordon, D. Rolland and T.P. Softley 209 (1996) 127

Objects

Bulk systems

Gases

- Reactions of H^- , D^- and HD^- transfer between an ethylene cation and propane $CH_3CD_2CH_3$: a study of kinetics using state-selected reactants, O. Dutuit, H. Palm, D. Berthomieu and Z. Herman 209 (1996) 259
- Semi-classical treatment of chemical reactions, G.D. Billing and N. Marković 209 (1996) 377

Supersonic beams

- An electron impact ionization slit-jet apparatus for laser absorption spectroscopy, T. Ruchti, A. Rohrbacher, T. Speck, J.P. Connelly, E.J. Bieske and J.P. Maier 209 (1996) 169

Liquid mixtures and solutions

- Theoretical determination of the solvation free energy in water and chloroform of the nucleic acid bases, M. Orozco, C. Colominas and F.J. Luque 209 (1996) 19
- Vibrational overtone spectroscopy of CH_2D_2 in liquid argon solutions, V.M. Blunt, N. Mina-Camilde, D.L. Cedeño and C. Manzanares I 209 (1996) 79

Crystals

- Ab initio generalized valence force field for zeolite modelling. 2. Aluminosilicates, V.A. Ermoshin, K.S. Smirnov and D. Bougeard 209 (1996) 41

Glasses

- Dephasing and diffusional linewidths in spectra of doped amorphous solids: comparison of photon echo and single molecule spectroscopy data for terrylene in polyethylene, Yu.G. Vainer, T.V. Plakhotnik and R.I. Personov 209 (1996) 101

Polymers

- Dephasing and diffusional linewidths in spectra of doped amorphous solids: comparison of photon echo and single molecule spectroscopy data for terrylene in polyethylene, Yu.G. Vainer, T.V. Plakhotnik and R.I. Personov 209 (1996) 101

Biological systems

- Theoretical determination of the solvation free energy in water and chloroform of the nucleic acid bases, M. Orozco, C. Colominas and F.J. Luque 209 (1996) 19

Microscopic systems*Atoms*

- Inelastic neutron-scattering study of free proton dynamics in γ -MnO₂, F. Fillaux, S.M. Bennington, J. Tomkinson and L.T. Yu 209 (1996) 111
- Alternative Sturmian bases and momentum space orbitals: an application to the hydrogen molecular ion, V. Aquilanti, S. Cavalli, C. Coletti and G. Grossi 209 (1996) 405

Molecules (neutral and ionic)

- Spectral quantization of transition state resonances in collinear Mu + H₂ and Mu + D₂ collisions, A.J.C. Varandas and H.G. Yu 209 (1996) 31
- Absorption by dissociative continua and Rydberg states in condensed matter: HCl in rare gas matrices, K.H. Gödderz, N. Schwentner and M. Chergui 209 (1996) 91
- Charge transfer and atomic rearrangement in collisions of Ar⁺(²P_{1/2,3/2}) with H₂ measured with a new PEPICO apparatus, C.J.G.J. Uiterwaal, J. van der Weg, J. van Eck, P.A. Zeijlmans van Emmichoven and A. Niehaus 209 (1996) 195
- Auto-ionization of the collisional complexes of metastable neon and H₂, D₂, or HD, B. Brunetti, S. Falcinelli, A. Sassara, J. de Andres and F. Vecchiocattivi 209 (1996) 205
- Simulation of the Ar₃⁺ absorption spectrum using Molecular Dynamics, A. Bastida and F.X. Gadea 209 (1996) 291
- Semi-classical treatment of chemical reactions, G.D. Billing and N. Marković 209 (1996) 377
- Theoretical charge-transfer cross sections for H⁺ + HCl(X¹Σ⁺) → H(²S_g) + HCl⁺(A²Σ⁺) II: classical path trajectory calculations, P.J. Kuntz, I. Paidarová and R. Polák 209 (1996) 389

-diatomic

- Absorption by dissociative continua and Rydberg states in condensed matter: HCl in rare gas matrices, K.H. Gödderz, N. Schwentner and M. Chergui 209 (1996) 91
- Pulsed-field ionization spectroscopy of CO via the E¹Π state and NO via the B²Π state, S.R. Mackenzie, E.J. Halse, E. Gordon, D. Rolland and T.P. Softley 209 (1996) 127
- An electron impact ionization slit-jet apparatus for laser absorption spectroscopy, T. Ruchti, A. Rohrbacher, T. Speck, J.P. Connelly, E.J. Bieske and J.P. Maier 209 (1996) 169
- A state-selected study of Ar⁺(²P_{3/2,1/2}) + O₂ charge transfer at collision energies below 4 eV using synchrotron radiation and guided beam techniques, O. Dutuit, C. Alcaraz, D. Gerlich, P.M. Guyon, J. Hepburn, C. Métayer-Zeitoun, J.B. Ozenne, M. Schweizer and T. Weng 209 (1996) 177
- Electronic excitation processes in the collisional system Na(3²S) + Rb⁺(¹S) → Na⁺ + Rb⁺(¹S) by crossed molecular beams in the 0.1–5.0 keV energy range, T. Romero, J. de Andrés, M. Albertí, J.M. Lucas and A. Aguilar 209 (1996) 217
- Differential cross sections, measured with guided ion beams: applications to N⁺ + N₂ and C₂H₂⁺ + C₂D₄ collisions, S. Mark and D. Gerlich 209 (1996) 235
- Ab initio calculations for Ar₂⁺, He₂⁺ and He₃⁺, of interest for the modelling of ionic rare-gas clusters, F.X. Gadea and I. Paidarová 209 (1996) 281
- Range and strength of interatomic forces: dispersion and induction contributions to the bonds of dications and of ionic molecules, V. Aquilanti, D. Cappelletti and F. Pirani 209 (1996) 299
- Theoretical picture of the dynamics of the autoionization event in He(2³S)–H₂ Penning ionization: collision energy dependence, J. Vojtík 209 (1996) 367
- Alternative Sturmian bases and momentum space orbitals: an application to the hydrogen molecular ion, V. Aquilanti, S. Cavalli, C. Coletti and G. Grossi 209 (1996) 405

-small polyatomics

- Absolute photoabsorption and photoionization of formaldehyde in the VUV and soft X-ray regions (3–200 eV), G. Cooper, J.E. Anderson and C.E. Brion 209 (1996) 61
- Vibrational overtone spectroscopy of CH₂D₂ in liquid argon solutions, V.M. Blunt, N. Mina-Camilde, D.L. Cedeño and C. Manzanares I 209 (1996) 79
- Dissociation of the COS⁺ ion by photoionisation: experiment and ab initio calculations The \tilde{A} – \tilde{X} Franck–Condon energy gap and the $\tilde{A}^2\Pi$, $\tilde{B}^2\Sigma^+$ vibronic state Franck–Condon energy regions, M.-J. Hubin-Franskin, J. Delwiche, P.-M. Guyon, M. Richard-Viard, M. Lavollée, O. Dutuit, J.-M. Robbe and J.-P. Flament 209 (1996) 143
- Experimental study of the dissociation of selected internal energy ions produced in low quantities: application to N₂O⁺ ions in the Franck–Condon gap and to small ionic water clusters, M. Richard-Viard, A. Delboulbé and M. Vervloet 209 (1996) 159
- Charge transfer of krypton ions with methane molecules from thermal energy to 10 eV, P. Tosi, C. Delvai, D. Bassi, O. Dmitriev, D. Cappelletti and F. Vecchiocattivi 209 (1996) 227
- Differential cross sections, measured with guided ion beams: applications to N⁺ + N₂ and C₂H₂⁺ + C₂D₄ collisions, S. Mark and D. Gerlich 209 (1996) 235
- Diabatic excited states of the (HeH₂)⁺ molecular ion for the charge exchange–excitation reaction: He⁺ + H₂ → HeH⁺ + H^{*}, V. Sidis 209 (1996) 313
- A quasiclassical and approximate quantum mechanical study of the intramolecular isotope effect in proton transfer elementary reactions: the Ne + HD⁺ → NeH⁺(NeD⁺) + D(H) system at low and moderate collision energies (0.02–0.77 eV), M. González, R.M. Blasco, X. Giménez and A. Aguilar 209 (1996) 355

-polymeric and biological

- Dynamical simulations for dissipative multi-state systems: discretized integral equation approach, M. Winterstetter and U. Weiss 209 (1996) 1

*Molecular aggregates**-dimers*

- Interaction potentials of Cd–Xe from temperature dependent absorption spectra, M.S. Helmi, T. Grycuk and G.D. Roston 209 (1996) 53
- Range and strength of interatomic forces: dispersion and induction contributions to the bonds of dications and of ionic molecules, V. Aquilanti, D. Cappelletti and F. Pirani 209 (1996) 299

-van der Waals molecules

- Interaction potentials of Cd–Xe from temperature dependent absorption spectra, M.S. Helmi, T. Grycuk and G.D. Roston 209 (1996) 53

-clusters

- Computations on nineteen isolated-pentagon-rule isomers of C₈₆, Z. Slanina, S.-L. Lee, M. Yoshida and E. Ōsawa 209 (1996) 13
- Deuteration of positive hydrogen cluster ions H₅⁺ to H₁₇⁺ at 10 K, W. Paul, S. Schlemmer, B. Lücke and D. Gerlich 209 (1996) 265
- Ab initio calculations for Ar₂⁺, He₂⁺ and He₃⁺, of interest for the modelling of ionic rare-gas clusters, F.X. Gadea and I. Paidarová 209 (1996) 281
- Simulation of the Ar₃⁺ absorption spectrum using Molecular Dynamics, A. Bastida and F.X. Gadea 209 (1996) 291

Ions and charge carriers

- A state-selected study of $\text{Ar}^+(\text{}^2\text{P}_{3/2,1/2}) + \text{O}_2$ charge transfer at collision energies below 4 eV using synchrotron radiation and guided beam techniques, O. Dutuit, C. Alcaraz, D. Gerlich, P.M. Guyon, J. Hepburn, C. Métayer-Zeitoun, J.B. Ozenne, M. Schweizer and T. Weng 209 (1996) 177
- Reactions of H^- , D^- and HD^- transfer between an ethylene cation and propane $\text{CH}_3\text{CD}_2\text{CH}_3$: a study of kinetics using state-selected reactants, O. Dutuit, H. Palm, D. Berthomieu and Z. Herman 209 (1996) 259
- Range and strength of interatomic forces: dispersion and induction contributions to the bonds of dications and of ionic molecules, V. Aquilanti, D. Cappelletti and F. Pirani 209 (1996) 299

Phenomena*Molecular structure*

- Computations on nineteen isolated-pentagon-rule isomers of C_{86} , Z. Slanina, S.-L. Lee, M. Yoshida and E. Ōsawa 209 (1996) 13

Vibrations and rotations of molecules

- Ab initio generalized valence force field for zeolite modelling. 2. Aluminosilicates, V.A. Ermoshin, K.S. Smirnov and D. Bougeard 209 (1996) 41
- Vibrational overtone spectroscopy of CH_2D_2 in liquid argon solutions, V.M. Blunt, N. Mina-Camilde, D.L. Cedeño and C. Manzanares I 209 (1996) 79

Electronic structure and states

- Interaction potentials of Cd–Xe from temperature dependent absorption spectra, M.S. Helmi, T. Grycuk and G.D. Roston 209 (1996) 53
- Absolute photoabsorption and photoionization of formaldehyde in the VUV and soft X-ray regions (3–200 eV), G. Cooper, J.E. Anderson and C.E. Brion 209 (1996) 61
- Electronic excitation processes in the collisional system $\text{Na}(3^2\text{S}) + \text{Rb}^+(^1\text{S}) \rightarrow \text{Na}^* + \text{Rb}^+(^1\text{S})$ by crossed molecular beams in the 0.1–5.0 keV energy range, T. Romero, J. de Andrés, M. Albertí, J.M. Lucas and A. Aguilar 209 (1996) 217
- Photodissociation, charge and atom transfer processes in electronically excited states of N_3^+ , F.R. Bennett, J.P. Maier, G. Chambaud and P. Rosmus 209 (1996) 275
- Ab initio calculations for Ar_2^+ , He_2^+ and He_3^+ , of interest for the modelling of ionic rare-gas clusters, F.X. Gadea and I. Paidarová 209 (1996) 281
- Alternative Sturmian bases and momentum space orbitals: an application to the hydrogen molecular ion, V. Aquilanti, S. Cavalli, C. Coletti and G. Grossi 209 (1996) 405

Molecular interactions

- Theoretical determination of the solvation free energy in water and chloroform of the nucleic acid bases, M. Orozco, C. Colominas and F.J. Luque 209 (1996) 19
- Spectral quantization of transition state resonances in collinear $\text{Mu} + \text{H}_2$ and $\text{Mu} + \text{D}_2$ collisions, A.J.C. Varandas and H.G. Yu 209 (1996) 31
- Absorption by dissociative continua and Rydberg states in condensed matter: HCl in rare gas matrices, K.H. Gödderz, N. Schwentner and M. Chergui 209 (1996) 91
- Range and strength of interatomic forces: dispersion and induction contributions to the bonds of dications and of ionic molecules, V. Aquilanti, D. Cappelletti and F. Pirani 209 (1996) 299

- Diabatic excited states of the $(\text{HeH}_2)^+$ molecular ion for the charge exchange–excitation reaction: $\text{He}^+ + \text{H}_2 \rightarrow \text{HeH}^+ + \text{H}^*$, V. Sidis 209 (1996) 313
- Spectral bandshapes and intensities*
- Simulation of the Ar_3^+ absorption spectrum using Molecular Dynamics, A. Bastida and F.X. Gadea 209 (1996) 291
- Coupling of electronic and nuclear motion*
- Dynamical simulations for dissipative multi-state systems: discretized integral equation approach, M. Winterstetter and U. Weiss 209 (1996) 1
- Electronic excitation processes in the collisional system $\text{Na}(3^2\text{S}) + \text{Rb}^+(^1\text{S}) \rightarrow \text{Na}^+ + \text{Rb}^+(^1\text{S})$ by crossed molecular beams in the 0.1–5.0 keV energy range, T. Romero, J. de Andrés, M. Albertí, J.M. Lucas and A. Aguilar 209 (1996) 217
- Diabatic excited states of the $(\text{HeH}_2)^+$ molecular ion for the charge exchange–excitation reaction: $\text{He}^+ + \text{H}_2 \rightarrow \text{HeH}^+ + \text{H}^*$, V. Sidis 209 (1996) 313
- Theoretical investigation of the $\text{Ar}^+(J) + \text{H}_2 \rightarrow \text{ArH}^+ + \text{H}$ reaction: semiclassical coupled wavepacket treatment, M. Sizun, F. Aguillon, V. Sidis, V. Zenevich, G.D. Billing and N. Marković 209 (1996) 327
- Energy transfer processes*
- Inelastic neutron-scattering study of free proton dynamics in $\gamma\text{-MnO}_2$, F. Fillaux, S.M. Bennington, J. Tomkinson and L.T. Yu 209 (1996) 111
- Molecular photophysical processes*
- Absorption by dissociative continua and Rydberg states in condensed matter: HCl in rare gas matrices, K.H. Gödderz, N. Schwentner and M. Chergui 209 (1996) 91
- Photodissociation, charge and atom transfer processes in electronically excited states of N_3^+ , F.R. Bennett, J.P. Maier, G. Chambaud and P. Rosmus 209 (1996) 275
- Intramolecular dynamics*
- Dissociation of the COS^+ ion by photoionisation: experiment and ab initio calculations The $\tilde{\text{A}}-\tilde{\text{X}}$ Franck–Condon energy gap and the $\tilde{\text{A}}^2\Pi$, $\tilde{\text{B}}^2\Sigma^+$ vibronic state Franck–Condon energy regions, M.-J. Hubin-Franskin, J. Delwiche, P.-M. Guyon, M. Richard-Viard, M. Lavollée, O. Dutuit, J.-M. Robbe and J.-P. Flament 209 (1996) 143
- Deuteration of positive hydrogen cluster ions H_5^+ to H_{17}^+ at 10 K, W. Paul, S. Schlemmer, B. Lücke and D. Gerlich 209 (1996) 265
- Coherence loss processes*
- Dephasing and diffusional linewidths in spectra of doped amorphous solids: comparison of photon echo and single molecule spectroscopy data for terrylene in polyethylene, Yu.G. Vainer, T.V. Plakhotnik and R.I. Personov 209 (1996) 101
- Reactions (including dissociation)*
- A state-selected study of $\text{Ar}^+(^2\text{P}_{3/2,1/2}) + \text{O}_2$ charge transfer at collision energies below 4 eV using synchrotron radiation and guided beam techniques, O. Dutuit, C. Alcaraz, D. Gerlich, P.M. Guyon, J. Hepburn, C. Métayer-Zeitoun, J.B. Ozenne, M. Schweizer and T. Weng 209 (1996) 177
- Charge transfer of krypton ions with methane molecules from thermal energy to 10 eV, P. Tosi, C. Delvai, D. Bassi, O. Dmitriev, D. Cappelletti and F. Vecchiocattivi 209 (1996) 227

- A quasiclassical and approximate quantum mechanical study of the intramolecular isotope effect in proton transfer elementary reactions: the $\text{Ne} + \text{HD}^+ \rightarrow \text{NeH}^+(\text{NeD}^+) + \text{D}(\text{H})$ system at low and moderate collision energies (0.02–0.77 eV), M. González, R.M. Blasco, X. Giménez and A. Aguilar 209 (1996) 355
- gas phase*
- Spectral quantization of transition state resonances in collinear $\text{Mu} + \text{H}_2$ and $\text{Mu} + \text{D}_2$ collisions, A.J.C. Varandas and H.G. Yu 209 (1996) 31
- Interaction potentials of Cd–Xe from temperature dependent absorption spectra, M.S. Helmi, T. Grycuk and G.D. Roston 209 (1996) 53
- Experimental study of the dissociation of selected internal energy ions produced in low quantities: application to N_2O^+ ions in the Franck–Condon gap and to small ionic water clusters, M. Richard-Viard, A. Delboulbé and M. Vervloet 209 (1996) 159
- A state-selected study of $\text{Ar}^+(\text{}^2\text{P}_{3/2,1/2}) + \text{O}_2$ charge transfer at collision energies below 4 eV using synchrotron radiation and guided beam techniques, O. Dutuit, C. Alcaraz, D. Gerlich, P.M. Guyon, J. Hepburn, C. Métayer-Zeitoun, J.B. Ozenne, M. Schweizer and T. Weng 209 (1996) 177
- Charge transfer and atomic rearrangement in collisions of $\text{Ar}^+(\text{}^2\text{P}_{1/2,3/2})$ with H_2 measured with a new PEPICO apparatus, C.J.G.J. Uiterwaal, J. van der Weg, J. van Eck, P.A. Zeijlmans van Emmichoven and A. Niehaus 209 (1996) 195
- Auto-ionization of the collisional complexes of metastable neon and H_2 , D_2 , or HD, B. Brunetti, S. Falcinelli, A. Sassara, J. de Andres and F. Vecchiocattivi 209 (1996) 205
- Differential cross sections, measured with guided ion beams: applications to $\text{N}^+ + \text{N}_2$ and $\text{C}_2\text{H}_2^+ + \text{C}_2\text{D}_4$ collisions, S. Mark and D. Gerlich 209 (1996) 235
- Reactions of H^- , D^- and HD^- transfer between an ethylene cation and propane $\text{CH}_3\text{CD}_2\text{CH}_3$: a study of kinetics using state-selected reactants, O. Dutuit, H. Palm, D. Berthomieu and Z. Herman 209 (1996) 259
- Photodissociation, charge and atom transfer processes in electronically excited states of N_3^+ , F.R. Bennett, J.P. Maier, G. Chambaud and P. Rosmus 209 (1996) 275
- Diabatic excited states of the $(\text{HeH}_2)^+$ molecular ion for the charge exchange–excitation reaction: $\text{He}^+ + \text{H}_2 \rightarrow \text{HeH}^+ + \text{H}^*$, V. Sidis 209 (1996) 313
- Theoretical investigation of the $\text{Ar}^+(J) + \text{H}_2 \rightarrow \text{ArH}^+ + \text{H}$ reaction: semiclassical coupled wavepacket treatment, M. Sizun, F. Aguillon, V. Sidis, V. Zenevich, G.D. Billing and N. Marković 209 (1996) 327
- A quasiclassical and approximate quantum mechanical study of the intramolecular isotope effect in proton transfer elementary reactions: the $\text{Ne} + \text{HD}^+ \rightarrow \text{NeH}^+(\text{NeD}^+) + \text{D}(\text{H})$ system at low and moderate collision energies (0.02–0.77 eV), M. González, R.M. Blasco, X. Giménez and A. Aguilar 209 (1996) 355
- Semi-classical treatment of chemical reactions, G.D. Billing and N. Marković 209 (1996) 377
- Theoretical charge-transfer cross sections for $\text{H}^+ + \text{HCl}(\text{}^1\Sigma^+) \rightarrow \text{H}(\text{}^2\text{S}_g) + \text{HCl}^+(\text{}^2\Sigma^+)$
II: classical path trajectory calculations, P.J. Kuntz, I. Paidarová and R. Polák 209 (1996) 389
- Electron transfer*
- Dynamical simulations for dissipative multi-state systems: discretized integral equation approach, M. Winterstetter and U. Weiss 209 (1996) 1
- Photodissociation, charge and atom transfer processes in electronically excited states of N_3^+ , F.R. Bennett, J.P. Maier, G. Chambaud and P. Rosmus 209 (1996) 275
- Theoretical charge-transfer cross sections for $\text{H}^+ + \text{HCl}(\text{}^1\Sigma^+) \rightarrow \text{H}(\text{}^2\text{S}_g) + \text{HCl}^+(\text{}^2\Sigma^+)$
II: classical path trajectory calculations, P.J. Kuntz, I. Paidarová and R. Polák 209 (1996) 389

Ionization (including Rydberg states)

- Absolute photoabsorption and photoionization of formaldehyde in the VUV and soft X-ray regions (3–200 eV), G. Cooper, J.E. Anderson and C.E. Brion 209 (1996) 61
- Pulsed-field ionization spectroscopy of CO via the $E^1\Pi$ state and NO via the $B^2\Pi$ state, S.R. Mackenzie, E.J. Halse, E. Gordon, D. Rolland and T.P. Softley 209 (1996) 127
- Theoretical picture of the dynamics of the autoionization event in $\text{He}(2^3\text{S})\text{--H}_2$ Penning ionization: collision energy dependence, J. Vojtík 209 (1996) 367

Isotopic effects

- Deuteration of positive hydrogen cluster ions H_5^+ to H_{17}^+ at 10 K, W. Paul, S. Schlemmer, B. Lücke and D. Gerlich 209 (1996) 265
- A quasiclassical and approximate quantum mechanical study of the intramolecular isotope effect in proton transfer elementary reactions: the $\text{Ne} + \text{HD}^+ \rightarrow \text{NeH}^+(\text{NeD}^+) + \text{D}(\text{H})$ system at low and moderate collision energies (0.02–0.77 eV), M. González, R.M. Blasco, X. Giménez and A. Aguilar 209 (1996) 355